ROCKY FLATS PLANT

NATIONAL ENVIRONMENTAL POLICY ACT DOCUMENTATION

ENVIRONMENTAL CHECKLIST

1. Date: 10/1/91

2. Activity/Project Name: IAG Site Characterization Activities in Floodplains/Wetlands for OUs 1, 2, 5 and 6 and the Geologic Characterization Program

3. Authorization or EJO:
ADS Number (E/WM only):

4. Project PA:

5. Initiating Line Managers: Cindy Gee (OU 1), Brook Wilson (OU 2), Tom Ottensman (OUs 5 & 6) and Marla Broussard (Geologic Site Characterization Program).

NOTE: Some of the work described below is part of the OU 1 RFI/RI field work under the Interagency Agreement. The OU 1 field work is scheduled in the IAG to be completed by December 18,1991. The CX accompanying this EC needs to be approved in time to permit meeting that schedule.

6. Project/Activity Description:

NOTE: The activities described here are a sub-set of those included in EC 59-91, IAG Site Characterization Activities, reviewed by NCC on May 22, 1991. At that time, NCC recommended a CX for all the activities included in that project. In reviewing the proposed CX, however, DOE HQ determined (in RFO/CX-017-91, copy attached) that the CX would only apply to site characterization activities outside floodplains/wetlands. HQ directed that another CX be prepared for the work within floodplains/wetlands, describing what effects, if any, such work would have on the floodplain/wetlands so it could be determined if a CX was also applicable to the floodplain/wetland work. The present documents include a new EC and a second, proposed CX for the floodplain/wetland work.

The same HQ document that directed preparation of a second EC and CX for the floodplain work also directed preparation of a third EC and CX for the well plugging activities under the Well Abandonment and Replacement Program. Material related to that program is not included here, but will be submitted at a later date.

The Department of Energy proposes to carry out site characterization activities, some of which will be within floodplains/wetlands, at its Rocky Flats Plant (RFP) north of Golden, CO. The activities will occur in operable units 1 (881 Hillside), 2 (903 Area), 5 (Woman Creek) and 6 (Walnut Creek) located south and east of the developed area of RFP. The site characterization activities that will be in floodplains and/or wetlands consist of 1) locating new surface water and sediment sampling stations, 2) establishing soil sample sites, 3) drilling new wells and boreholes and 4) collecting surface water, groundwater, sediment, soil and soil gas samples. Approximate locations of these activities are shown in the accompanying figures. Location of the sampling and well-drilling activities that will take place under the Geologic Characterization Program are shown in figure 11. Each of these activities is discussed below.

Locating new surface water and sediment sampling stations consists of driving a stake in the ground to mark a spot which can be returned to for future sample collection. This activity will have no adverse impacts to floodplains or wetlands.

Establishing soil sample sites involves one of two procedures. One is to simply determine the point from which small (two-to-three tablespoons) surficial soil samples will be collected. Surficial soil sampling sites may be located anywhere there is soil. The second procedure is to identify the locations for soil sample pits by randomly selecting a point on a grid within the desired area. There

could be a soil sample pit and one or more surficial samples sites located within each of the squares within the "estimated maximum extent" line shown in figure 2. Of those squares, or sample plots, numbers 38, 51, 52, 57, 81, 96, 109 and 115 include areas within a floodplain. Thus, soil samples from any or all of these sample plots could be taken from within a floodplain. Exact locations of soil sampling sites and pits within each square have not yet been fixed, although some of the accompanying figures show approximate proposed locations. Soil sample pits are typically nine feet long, five feet wide and four feet deep and are dug by a backhoe. These pits are typically dug and backfilled within a day. The pits may be located within a floodplain but are seldom located in wetland areas because of the difficulty of digging in saturated soils. None of the proposed locations is in a wetland. Neither of the procedures will have an adverse impact to floodplains or wetlands.

Drilling new wells, boreholes and soil gas sampling holes involves driving a drilling rig to the designated site and drilling the hole, typically within a day. Wells and boreholes are characteristically four-to-six inches in diameter. As the drill bit advances, drill cuttings are brought to the surface and shoveled into 55-gallon drums for analysis of any contaminants, storage and ultimate disposal. When drilling is completed, surface evidence of the activity is downed vegetation at the site and a plastic or metal pipe sticking two-to-three feet above the ground.

Drilling in wetlands will be avoided where the drilling target permits because of, among other things, the special measures required when drilling in saturated soils and because drill rigs often become stuck if it is necessary to drive into a wetland. Because wetlands at RFP tend to be linear or very small, it will seldom, if ever, be necessary to drive drilling rigs into or across wetlands areas to reach, or work in, specific drilling sites. Typically, drilling targets are large enough that field decisions can be made to relocate drilling sites the small distance typically necessary to avoid wetlands. For instance, the soil gas sample sites, shown in figure 3 as being in the South Interceptor Ditch, will be relocated by field crews the five-to-10 feet necessary to move them out of the Ditch and its wetlands. It is possible, however, that a drilling target may require a hole be drilled in a wetland. If this occurs, the surface evidence of drilling will be similar to that in dryland areas: downed vegetation and a length of plastic or metal pipe sticking above the surface. In addition, depending on the degree of soil saturation or presence of standing water, there could be a small area of disturbed soil where the drill rig drove and around the drill site itself where personnel were working. This area is estimated to be on the order of 100- to 200-square feet at an individual wetland drill site. While the likelihood of drilling in wetlands is remote, it cannot be ruled out. Even if undertaken, drilling in a typical RFP wetlands is unlikely to cause any adverse impacts that would not be healed by the following growing season.

Approximate locations of proposed drilling sites within floodplains are shown in the accompanying figures and are highlighted by arrows. Determination of whether a site is within or outside a 100-year floodplain is based on a comparison of the figures to preliminary floodplain information from the U. S. Army Corps of Engineers. A total of 24 well or borehole sites is judged to be within, or probably within, a floodplain boundary, based on that comparison. The locations shown are approximate and many proposed drilling sites can and will be changed in the field by as much as 50 feet to accommodate field conditions and for other reasons. Thus, any indication that a given well will be within or outside a floodplain is tentative, as is any summary of the total number of wells that will be within or outside a floodplain. Based on the information in the preceding paragraphs, drilling of wells and boreholes is not expected to have any adverse impacts on floodplains or wetlands.

Collection of samples consists of driving or walking to a sampling location or well and collecting up to a few pounds of the desired medium. Sampling may be done on a weekly, monthly, quarterly or irregular basis. All existing and proposed surface water and sediment sampling stations are located in a floodplain and most are located in wetland areas. Collection of samples will have no adverse impacts on floodplains or wetlands.

Because of the nature of the sample station location, drilling and sample collection activities, no adverse impacts are expected to floodplains or wetlands from the site characterization activities.

	Checklist YES	NO	
7. Funding:			
A. Is the project a budget line item?		X	
B. Specify funding source (DP?, EM?, other?)	EM		
8. Statutes applicable:			
A. Will the project require or potentially require permit or permit modification under:			
1. Clean Air Act?		X	
2. Clean Water Act?		X	
B. Does the project involve RCRA ?	X		(see Note 1)
1. Will a RCRA permit or modification be required?		X	
2. Does the project include a RCRA removal?		X	
3. Does project include RCRA closure? - partial? - full?		X	
4. Does project include excavation or capping?	X		(see Note 2)
5. Will the cost stay within $2 million and the duration within 12 months? (Explain in Project Description)	X		
C. Does the project involve CERCLA?	X		(see Note 2)
1. Does project include CERCLA removal?		X	
2. Will the cost stay within $2 million and the duration within 12 months?	X		
D. Does the action threaten to violate statutory, regulatory, or permit requirements, or DOE Order?		X	
E. Will the action be in a SWMU or IHSS?	X		(see Note 3)
9. Will this project construct or require a new or expanded waste disposal, recovery, storage or treatment facility?		X	
10. Is project needed for IAG, AIP, FFCA, or other federal or state agreement? (Specify and explain any schedule urgency and deadlines in project description.)	X		(see Note 4)
11. Is the project			
A. a new process, building, etc. or		X	
B. a modification to an existing?		X	
C. capital equipment/machinery installation?		X	
12. Location Items:			
A. Will the project result in, or have the potential to result in, long term changes to the environment?		X	
B. Will the action occur outside the security zone/protected area (ie, outside orange gates 8 and 10, posts 100 and 900)?	X		
C. Will the action take place in a wetland or floodplain?	X		
13. Will the project result in changes and/or disturbances of the following existing considerations?			
A. noise levels		X	
B. air emissions		X	
C. liquid effluents		X	
D. solid wastes		X	

		YES	NO	
E.	radioactive wastes (including contaminated soil)	X		(see Note 5)
F.	hazardous waste	X		(see Note 5)
G.	mixed waste (radioactive and hazardous)	X		(see Note 5)
H.	chemical or petroleum product storage		X	
I.	water use (withdrawal of groundwater or diversion or withdrawal of surface water)	X		(see Note 6)
J.	drinking water system		X	
K.	sewage disposal system		X	
L.	soil movement outside facility fences or beyond SWMU/IHSS boundaries	X		(see Note 7)
M.	site clearing, excavation, or other physical alterations to grade.		X	

Note 1 The site characterization activities in floodplains/wetlands are part of the work being carried out pursuant to the provisions of RCRA and CERCLA.

Note 2 The soil sampling activities will involve work that could be construed as excavation. As presented in the project description, holes will be dug and refilled, typically within a single day, to obtain samples of soil. These holes will be approximately nine feet long, five feet wide and four feet deep. In addition, wells and boreholes will be drilled. Applicable RFP procedures will be followed in handling, transporting and disposing of any excavated material.

Note 3 Some of the site characterization work in floodplain/wetlands will take place in SWMUs/IHSSs inasmuch as one of the purposes of the project is to characterize the nature and extent of contamination in certain SWMUs/IHSSs. Applicable RFP procedures will be followed for all activities in SWMUs/IHSSs.

Note 4 All work undertaken as part of this project is part of work called for under the IAG. Completion dates for the field work range from December, 1991 for OU 1 to November, 1992, for OU 6. Because of the pressing IAG deadlines for OU 1, it is important that approval of this EC and the accompanying CX be expedited.

Note 5 The drilling activities will produce drill cuttings which could contain constituents that are radioactive and/or hazardous. These cuttings will placed in drums as they are produced, analyzed for any contaminants and disposed of in accordance with applicable RFP procedures.

Note 6 Both surface water and groundwater will be withdrawn in the course of sample collection. While no estimate is available of total quantities, individual samples will be on the order of pints and quarts of water.

Note 7 Soil samples gathered from within SWMUs/IHSSs will be removed from those areas and taken to other locations at RFP and to off-site laboratories for analysis. Individual sample sizes will be on the order of a few pounds. Applicable RFP procedures for handling and transporting such material will be followed.

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